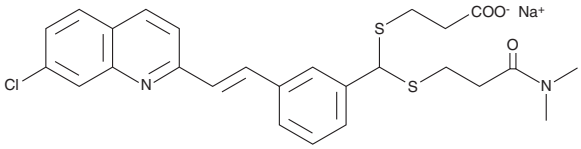
PRODUCT INFORMATION

MK-571 (sodium salt)

Item No. 70720

CAS Registry No.:	115103-85-0
Formal Name:	(E)-3-[[[3-[2-(7-chloro-2-quinolinyl)ethenyl]phenyl][[3-(dimethylamino)-3-oxopropyl]thio]methyl]thio]-propanoic acid, sodium salt
Synonym:	L-660,711
MF:	$C_{26}H_{26}ClN_2O_3S_2 \bullet Na$
FW:	537.1
Purity:	≥95%
UV/Vis.:	λ_{max}: 226, 283, 328, 345, 358 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

MK-571 (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the MK-571 (sodium salt) in the solvent of choice, which should be purged with an inert gas. MK-571 (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). It is also soluble in water. The solubility of MK-571 (sodium salt) in ethanol is approximately 1 mg/ml, approximately 10 mg/ml in DMSO and DMF, and approximately 20 mg/ml in water. We do not recommend storing the aqueous solution for more than one day.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of MK-571 (sodium salt) can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of MK-571 (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

MK-571 is a cysteinyl leukotriene 1 ($CysLT_1$) receptor antagonist (K_i = 2.1 nM in a radioligand binding assay using isolated human lung membranes).[1] It inhibits contractions induced by leukotriene D_4 (LTD_4; Item No. 20310) or LTE_4 (Item No. 20410) in histamine-primed isolated guinea pig trachea (pA_2s = 9.4 and 9.1, respectively), but does not inhibit contractions induced by LTC_4 (Item No. 20210) in histamine-primed isolated guinea pig trachea when used at a concentration of 190 nM. MK-571 (100 nM) inhibits LTD_4-induced calcium mobilization in COS-7 monkey kidney cells expressing the human $CysLT_1$ receptor in a reporter assay.[2] MK-571 (5 mg/kg) improves tissue damping and elasticity, markers of lung function, and decreases IL-4 and IL-5 levels in bronchoalveolar lavage fluid (BALF) in a mouse model of ovalbumin-induced asthma.[3]

References

1. Jones, T.R., Zamboni, R., Belley, M., *et al. Can. J. Physiol. Pharmacol.* **67(1)**, 17-28 (1989).
2. Lynch, K.R., O'Neill, G.P., Liu, Q., *et al. Nature* **399(6738)**, 789-793 (1999).
3. da Cunha, A.A., Silveira, J.S., Antunes, G.L., *et al. Exp. Lung Res.* **47(8)**, 355-367 (2021).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM